

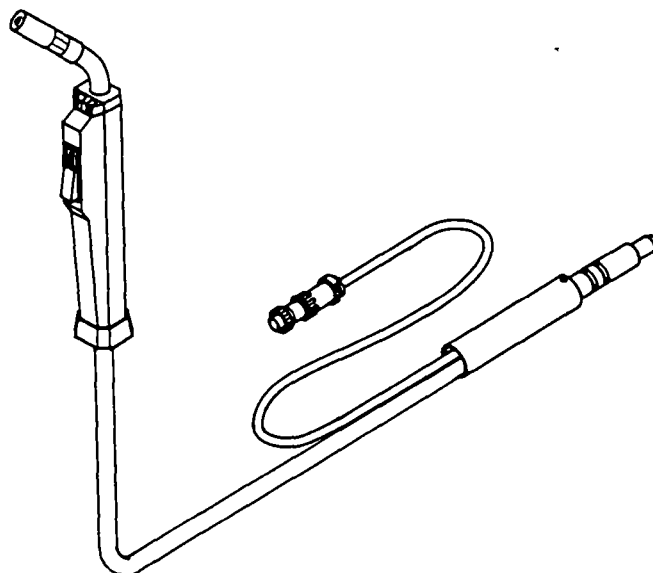


January 1990

FORM: OM-1028A

Effective With Style No. KA-16

MODEL: GA-17C



# OWNER'S MANUAL

**IMPORTANT:** Read and understand the entire contents of both this manual and the power source manual used with this unit, with special emphasis on the safety material throughout both manuals, before installing, operating, or maintaining this equipment. This unit and these instructions are for use only by persons trained and experienced in the safe operation of welding equipment. Do not allow untrained persons to install, operate, or maintain this unit. Contact your distributor if you do not fully understand these instructions.

**MILLER ELECTRIC Mfg. Co.**  
A Miller Group Ltd., Company

P.O. Box 1079  
Appleton, WI 54912 USA  
Tel. 414-734-9821



# LIMITED WARRANTY

EFFECTIVE: MARCH 15, 1989

This warranty supersedes all previous MILLER warranties and is exclusive with no other guarantees or warranties expressed or implied.

**LIMITED WARRANTY** – Subject to the terms and conditions hereof, Miller Electric Mfg. Co., Appleton, Wisconsin warrants to its Distributor/Dealer that all new and unused Equipment furnished by Miller is free from defect in workmanship and material as of the time and place of delivery by Miller. No warranty is made by Miller with respect to engines, trade accessories or other items manufactured by others. Such engines, trade accessories and other items are sold subject to the warranties of their respective manufacturers, if any. All engines are warranted by their manufacturer for one year from date of original purchase, except Tecumseh and Onan engines which have a two year warranty.

Except as specified below, Miller's warranty does not apply to components having normal useful life of less than one (1) year, such as spot welder tips, relay and contactor points, MILLER-MATIC parts that come in contact with the welding wire including nozzles and nozzle insulators where failure does not result from defect in workmanship or material.

Miller shall be required to honor warranty claims on warranted Equipment in the event of failure resulting from a defect within the following periods from the date of delivery of Equipment to the original user:

1. Arc welders, power sources, robots, and ..... 1 year components
2. Load banks ..... 1 year
3. Original main power rectifiers ..... 3 years (labor – 1 year only)
4. All welding guns, feeder/guns and torches ..... 90 days
5. All other Millermatic Feeders ..... 1 year
6. Replacement or repair parts, exclusive of labor . 60 days
7. Batteries ..... 6 months

provided that Miller is notified in writing within thirty (30) days of the date of such failure.

As a matter of general policy only, Miller may honor claims submitted by the original user within the foregoing periods.

In the case of Miller's breach of warranty or any other duty with respect to the quality of any goods, the exclusive remedies therefore shall be, at Miller's option (1) repair or (2) replacement or, where authorized in writing by Miller in appropriate cases, (3) the reasonable cost of repair or replacement at an authorized Miller service station or (4) payment of or credit for the purchase price (less reasonable depreciation based upon actual use) upon return of the goods at Customer's risk and expense. MILLER's option of repair or replacement will be F.O.B., Factory at Appleton, Wisconsin, or F.O.B. at a MILLER authorized service facility, therefore, no compensation for transportation costs of any kind will be allowed. Upon receipt of notice of apparent defect or failure, Miller shall instruct the claimant on the warranty claim procedures to be followed.

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**AMENDMENT TO SECTION 6 – PARTS LIST**

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7-		Added	106 590	O-RING, .375 ID x .103CS nitrile . . . . .	1

\*\*First digit represents page no – digits following dash represent item no.

BE SURE TO PROVIDE MODEL AND SERIAL NUMBER WHEN ORDERING REPLACEMENT PARTS.









## SECTION 1 – SAFETY PRECAUTIONS AND SIGNAL WORDS

### 1-1. GENERAL INFORMATION AND SAFETY

#### A. General

Information presented in this manual and on various labels, tags, and plates on the unit pertains to equipment design, installation, operation, maintenance, and troubleshooting which should be read, understood, and followed for the safe and effective use of this equipment.

#### B. Safety

The installation, operation, maintenance, and troubleshooting of arc welding equipment requires practices and procedures which ensure personal safety and the safety of others. Therefore, this equipment is to be installed, operated, and maintained only by qualified persons in accordance with this manual and all applicable codes such as, but not limited to, those listed at the end of Section 1 – Safety Rules For Operation Of Arc Welding Power Source in the welding power source Owner's Manual.

### 1-2. SAFETY ALERT SYMBOL AND SIGNAL WORDS

The following safety alert symbol and signal words are used throughout this manual to call attention to and identify different levels of hazard and special instructions.



This safety alert symbol is used with the signal words **WARNING** and **CAUTION** to call attention to the safety statements.



**WARNING** statements identify procedures or practices which must be followed to avoid serious personal injury or loss of life.



**CAUTION** statements identify procedures or practices which must be followed to avoid minor personal injury or damage to this equipment.

**IMPORTANT** statements identify special instructions necessary for the most efficient operation of this equipment.

## SECTION 2 – INTRODUCTION

Table 2-1. Specifications

Ampere Rating 60% Duty Cycle	Wire Diameter	Cable Length	Cooling Method	Weight	
				Net	Ship
170 Amperes With CO <sub>2</sub>	0.023-0.035 in. (0.6-0.9 mm)	10 ft. (3.0 m)	Air	3.5 lbs. (1.6 kg)	6 lbs. (2.7 kg)
		12 ft. (3.7 m)		4 lbs. (1.8 kg)	6.5 lbs. (3 kg)
		15 ft. (4.6 m)		4.5 lbs. (2 kg)	7 lbs. (3.2 kg)

### 2-1. DUTY CYCLE

The duty cycle of a welding gun is the percentage of a ten minute period that a gun can be operated at a given output without overheating and damaging the gun. This gun is rated at 60% duty cycle using CO<sub>2</sub> shielding gas. This means the gun can be operated at 170 amperes for six minutes out of ten with CO<sub>2</sub> shielding gas. During the remaining four minutes, the gun must operate at no load to permit proper cooling. If rated amperage is exceeded, the duty cycle must be reduced.



**CAUTION; EXCEEDING THE RATED AMPERAGE WITH CO<sub>2</sub> OR FAILING TO REDUCE THE WELDING AMPERAGE OR DUTY CYCLE WHEN USING A MIXED SHIELDING GAS can result in damage to the gun.**

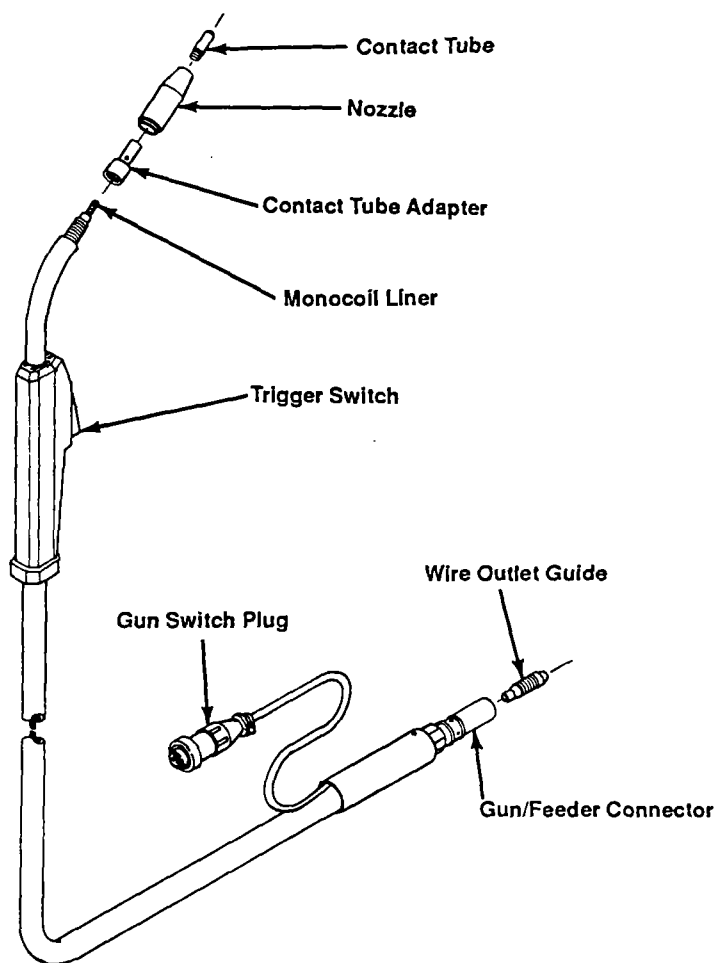
- Do not exceed rated amperage when using CO<sub>2</sub>.
- Operate at 30% duty cycle when using mixed shielding gas.

### 2-2. DESCRIPTION

This unit is an air-cooled semiautomatic Gas Metal Arc Welding (GMAW) gun.



## SECTION 3 – INSTALLATION



TB-124 473-A

Figure 3-1. Gun Components



### **WARNING: ELECTRIC SHOCK can kill.**

- Do not touch live electrical parts.
- Shut down welding power source and wire feeder, and disconnect input power employing lockout/tagging procedures before inspecting or installing gun.

Lockout/tagging procedures consist of removing input power plug from receptacle, padlocking line disconnect switch in open position, removing fuses from fuse box, or shutting off and red-tagging circuit breaker or other disconnecting device.

### **3-1. GUN/WIRE FEEDER CONNECTIONS (Figure 3-1)**

Install the gun/feeder connector into the drive assembly on the wire feeder as follows:

**IMPORTANT:** The wire outlet guide is provided as part of the gun assembly.

1. Loosen the gun/feeder connector securing knob on the wire drive assembly.

**IMPORTANT:** Wire guides should be positioned as close as possible to the drive rolls without touching them. This gives wire maximum column strength.

2. Insert gun into wire drive assembly until gun/feeder connector stops against wire drive assembly.
3. Tighten gun/feeder connector securing knob.

### **3-2. GUN SWITCH CONNECTION (Figure 3-1)**

Connect gun trigger switch into TRIGGER receptacle on wire feeder as follows: align keyways, insert plug, and rotate threaded collar fully clockwise.



## SECTION 4 – SEQUENCE OF OPERATION

### 4-1. GAS METAL ARC WELDING (GMAW)



**WARNING: ELECTRIC SHOCK can kill; MOVING PARTS can cause serious injury; IMPROPER AIRFLOW AND EXPOSURE TO ENVIRONMENT can damage internal parts.**

- *Do not touch live electrical parts.*
- *Keep away from moving parts.*
- *Keep all covers and panels in place while operating.*

Warranty is void if the wire feeder is operated with any portion of the outer enclosure removed.

**ARC RAYS, SPARKS, AND HOT SURFACES can burn eyes and skin; NOISE can damage hearing.**

- *Wear correct eye, ear, and body protection.*

**FUMES AND GASES can seriously harm your health.**

- *Keep your head out of the fumes.*
- *Ventilate to keep from breathing fumes and gases.*
- *If ventilation is inadequate, use approved breathing device.*

**WELDING WIRE can cause puncture wounds.**

- *Do not point gun toward any part of the body, any conductive surface, or other personnel.*

**HOT METAL, SPATTER, AND SLAG can cause fire and burns.**

- *Watch for fire.*
- *Keep a fire extinguisher nearby, and know how to use it.*
- *Do not use near flammable material.*
- *Allow work and equipment to cool before handling.*

**MAGNETIC FIELDS FROM HIGH CURRENTS can affect pacemaker operation.**

- *Wearers should consult their doctor before going near arc welding, gouging, or spot welding operations.*

See Section 1 - Safety Rules For Operation Of Arc Welding Power Source in the welding power source Owner's Manual for basic welding safety information.

1. Be sure that proper electrical connections have been made to the welding power source and the wire feeder.
2. Be sure that the welding wire has been properly threaded and that correct initial tensions have been set on the drive rolls (refer to the appropriate Owner's Manual).

3. Be sure that the proper shielding gas is connected to the shielding gas valve.
4. Place the wire feed control(s) in the required position for the welding setup.
5. Place the controls on the welding power source in the required position for the welding setup (refer to welding power source Owner's Manual).
6. Wear dry insulating gloves and clothing.
7. Connect work clamp to clean, bare metal at workpiece.
8. Turn on the shielding gas supply.
9. Energize the welding power source and the wire feeder (refer to the respective Owner's Manual).

**IMPORTANT: When installing new equipment, or after prolonged shutdown, allow shielding gas to flow continuously for at least one minute before welding to purge the shielding gas line. To avoid wasting wire while purging, open the drive roll housing.**

10. Press Purge button on the wire feeder (if applicable) or the gun switch to purge the gas line.
11. Close drive roll housing, and adjust tension (see appropriate Owner's Manual).
12. Press the gun trigger, and run the welding wire out beyond the end of the gas nozzle. Cut the wire off so it extends out 1/4 to 3/8 in. (6.4 mm to 9.5 mm) from end of nozzle.
13. Set the Wire Speed control slightly higher than anticipated wire speed.
14. Wear welding helmet with proper filter lens according to ANSI Z49.1.
15. Hold the end of the gas nozzle approximately 1/2 in. (12.7 mm) from the workpiece.
16. Press the gun trigger. Gas starts to flow, wire starts to feed, and the arc will be established. If the welding wire appears to slip, adjust drive roll tension according to wire feeder Owner's Manual.
17. After the controls on the welding power source and the wire feeder (if applicable) have been adjusted for normal operation, the welding power source (and wire feeder) will function automatically when the gun trigger is pressed. Releasing the gun trigger will extinguish the arc and cause the wire feed and gas flow to stop.

### 4-2. SHUTTING DOWN

1. Stop welding.
2. Turn off welding power source and wire feeder.
3. Turn off the shielding gas at its source.



**WARNING: HIGH CONCENTRATION OF SHIELDING GAS can harm health or kill.**

- *Shut off gas supply when not in use.*



## SECTION 5 – MAINTENANCE

### 5-1. INSPECTION AND UPKEEP

Usage and shop conditions will determine frequency and type of maintenance required.



**WARNING:** ELECTRIC SHOCK can kill; MOVING PARTS can cause serious injury; WELDING WIRE can cause puncture wounds; HOT SURFACES can cause severe burns.

- Do not touch live electrical parts.
- Shut down welding power source and wire feeder before working on gun.
- Disconnect gun from wire feeder before inspecting, maintaining, or servicing.
- Allow a cooling period before servicing.

1. Inspect gun for broken areas, cracks and loose parts; tighten, repair and replace as required.
2. Carefully remove any weld spatter or dirt that has accumulated around nozzle opening and inside nozzle.
3. Repair or replace as required all hose and cables; give particular attention to frayed and cracked insulation and areas where it enters equipment.
4. Remove grease and grime from components and moisture from electrical parts and cables.
5. Blow out casing with compressed air when changing wire. This removes any loose metal chips and dirt that may have accumulated.



**CAUTION:** FLYING DIRT AND METAL CHIPS can injure personnel and damage equipment.

- Point gun liner only in a safe direction away from personnel and equipment when cleaning with compressed air.

### 5-2. CONTACT TUBE REPLACEMENT (Figure 3-1)



**WARNING:** ELECTRIC SHOCK can kill; MOVING PARTS can cause serious injury; WELDING WIRE can cause puncture wounds; HOT SURFACES can cause severe burns.

- Do not touch live electrical parts.
- Shut down welding power source and wire feeder before working on gun.
- Disconnect gun from wire feeder before inspecting, maintaining, or servicing.
- Allow a cooling period before servicing.

1. Remove nozzle. A slight twist clockwise aids removal and installation.
2. Cut off any portion of electrode wire which extends beyond end of contact tube.

3. Remove contact tube, and replace with new contact tube.

4. Reinstall nozzle, and resume operation.

### 5-3. CHANGING WIRE SIZES AND REPLACING LINER



**WARNING:** ELECTRIC SHOCK can kill; MOVING PARTS can cause serious injury; WELDING WIRE can cause puncture wounds; HOT SURFACES can cause severe burns.

- Do not touch live electrical parts.
- Shut down welding power source and wire feeder before working on gun.
- Disconnect gun from wire feeder before inspecting, maintaining, or servicing.
- Allow a cooling period before servicing.

**IMPORTANT:** .030 and .035 in. (0.8 and 0.9 mm) diameter wires use the same monocoil liner and outlet guide. Changing from .030 in. (0.8 mm) wire to .035 in. (0.9 mm) wire or vice versa requires changing the contact tube only (see Section 5-2).

To change from .030 in. (0.8 mm) wire or .035 in. (0.9 mm) wire to .023 in. (0.6 mm) wire or vice versa, or to replace monocoil liner, proceed as follows:

1. Remove nozzle. A slight twist clockwise aids removal and installation.
2. Cut off any portion of electrode wire which extends beyond end of contact tube.



**CAUTION:** LOOSE WELDING WIRE can cause injury.

- Keep firm hold on wire during installation, removal, and threading operations.

Spooled wire has a tendency to unravel rapidly when loosened from the spool.

3. Manually retract wire onto wire spool (see wire feeder Owner's Manual).
4. Remove contact tube and contact tube adapter.
5. Disconnect gun assembly from wire feeder, if applicable, and lay it out flat (no coils in cable/conduit).
6. Remove outlet guide.
7. Pull out monocoil liner from gun/feeder connector end of gun assembly.



**CAUTION:** FLYING DIRT AND METAL CHIPS can injure personnel and damage equipment.

- Point gun liner only in a safe direction away from personnel and equipment when cleaning with compressed air.

8. Clean gun casing or liner with compressed air while liner or welding wire is removed.





9. Insert new monocoil liner into gun/feeder end of gun assembly. Be sure monocoil covered with tubing is at the gun/feeder connector.
10. Insert new outlet guide so that 1/8 in. (3 mm) of liner sticks out. Hand tighten outlet guide and then tighten two full turns more.



**CAUTION: OVERTIGHTENING OUTLET GUIDE damages liner.**

- *Do not overtighten outlet guide.*

11. Cut off liner so that 3/8 in. (9.5 mm) of liner sticks out of the head tube.
12. Install contact tube adapter.
13. Reinstall appropriate contact tube and nozzle.
14. Reinstall gun to wire drive assembly.
15. Thread welding wire according to the wire feeder Owner's manual, and resume operation.



## SECTION 6 – PARTS LIST

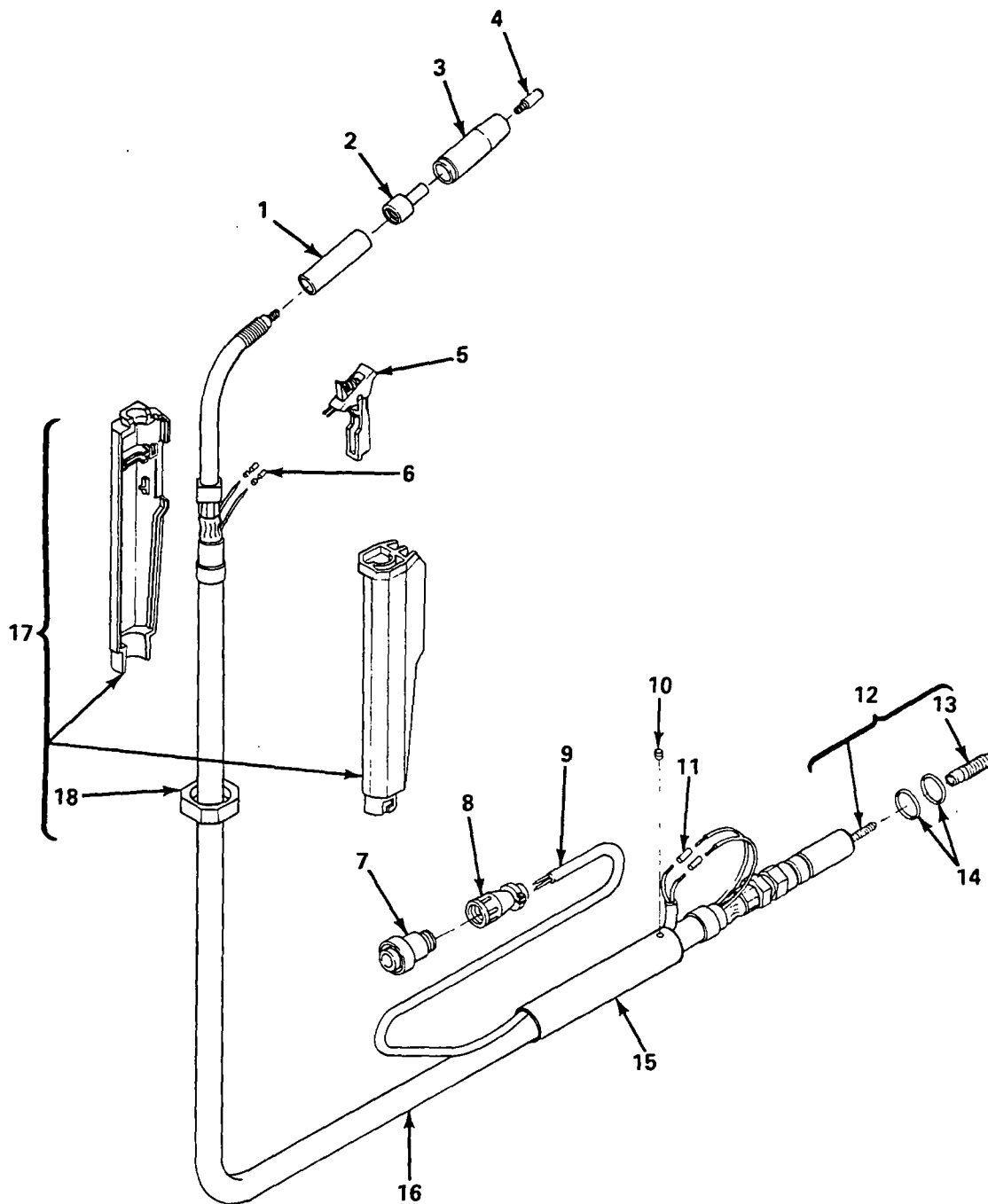


Figure 6-1. Exploded View Of GA-17C Gun

TC-124 605-B



Item No.	Part No.	Description	Quantity
<b>Figure 6-1. Exploded View Of GA-17C Gun</b>			
1	089 885	TUBING, nprn .375 ID x .062 (order by ft) . . . . .	1ft
2	118 267	ADAPTER, contact tube . . . . .	1
3	128 535	NOZZLE, slip type 1/2 orf . . . . .	1
4	087 299	TUBE, contact .023 wire . . . . .	2
4	000 067	TUBE, contact .030 wire . . . . .	2
4	000 068	TUBE, contact .035 wire . . . . .	2
5	120 164	TRIGGER, switch . . . . .	1
6	089 902	TERMINAL, receptacle pin . . . . .	2
7	079 878	HOUSING PLUG & PINS, (consisting of) . . . . .	1
	079 535	· TERMINAL, male 1 pin sz 16 18-14 wire . . . . .	4
8	048 834	CLAMP, cable . . . . .	1
9	604 525	CABLE, No. 18 2/c (order by ft) . . . . .	2ft
10	602 173	SCREW, set stl sch 10-32 x .250 cup point . . . . .	1
11	081 909	SPLICE, prl 20-16 wire nylon . . . . .	2
12	129 178	KIT, liner monocoil .023/.025 wire (consisting of) . . . . .	1
13	128 769	· GUIDE, wire outlet .023 . . . . .	1
12	129 179	KIT, liner monocoil .030/.035 wire (consisting of) . . . . .	1
13	120 995	· GUIDE, wire outlet .030-.045 . . . . .	1
14	079 974	O-RING, 1/2 ID x .103CS rbr . . . . .	2
15	133 147	STRAIN RELIEF, cable . . . . .	1
16	133 352	CABLE, conduit 10ft . . . . .	1
16	133 353	CABLE, conduit 12ft . . . . .	1
16	133 351	CABLE, conduit 15ft . . . . .	1
17	124 697	HANDLE, gun (consisting of) . . . . .	1
18	128 758	· RING, locking . . . . .	1

BE SURE TO PROVIDE MODEL AND SERIAL NUMBER WHEN ORDERING REPLACEMENT PARTS.









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Amend Parts List as follow:

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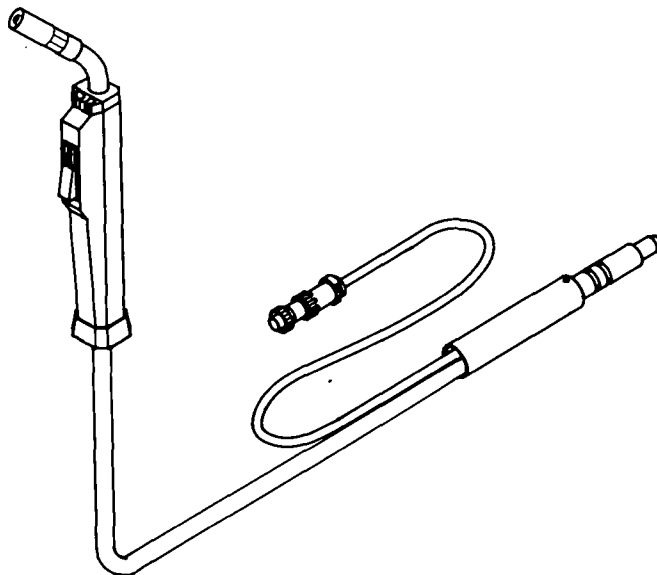


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## SECTION 1 – SAFETY PRECAUTIONS AND SIGNAL WORDS

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The duty cycle of a welding gun is the percentage of a ten minute period that a gun can be operated at a given output without overheating and damaging the gun. This gun is rated at 60% duty cycle using CO<sub>2</sub> shielding gas. This means the gun can be operated at 170 amperes for six minutes out of ten with CO<sub>2</sub> shielding gas. During the remaining four minutes, the gun must operate at no load to permit proper cooling. If rated amperage is exceeded, the duty cycle must be reduced.



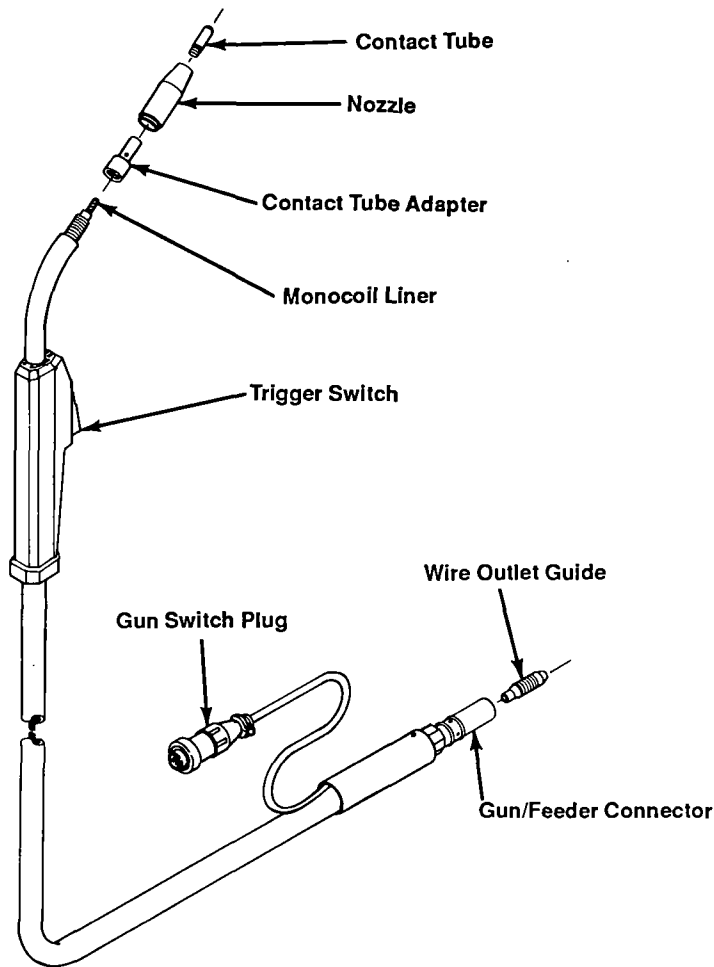
**CAUTION; EXCEEDING THE RATED AMPERAGE WITH CO<sub>2</sub> OR FAILING TO REDUCE THE WELDING AMPERAGE OR DUTY CYCLE WHEN USING A MIXED SHIELDING GAS can result in damage to the gun.**

- Do not exceed rated amperage when using CO<sub>2</sub>.
- Operate at 30% duty cycle when using mixed shielding gas.

### 2-2. DESCRIPTION

This unit is an air-cooled semiautomatic Gas Metal Arc Welding (GMAW) gun.

## SECTION 3 – INSTALLATION



TB-124 473-A

Figure 3-1. Gun Components



### **WARNING: ELECTRIC SHOCK can kill.**

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- Shut down welding power source and wire feeder, and disconnect input power employing lockout/tagging procedures before inspecting or installing gun.

Lockout/tagging procedures consist of removing input power plug from receptacle, padlocking line disconnect switch in open position, removing fuses from fuse box, or shutting off and red-tagging circuit breaker or other disconnecting device.

### **3-1. GUN/WIRE FEEDER CONNECTIONS (Figure 3-1)**

Install the gun/feeder connector into the drive assembly on the wire feeder as follows:

**IMPORTANT:** The wire outlet guide is provided as part of the gun assembly.

1. Loosen the gun/feeder connector securing knob on the wire drive assembly.

**IMPORTANT:** Wire guides should be positioned as close as possible to the drive rolls without touching them. This gives wire maximum column strength.

2. Insert gun into wire drive assembly until gun/feeder connector stops against wire drive assembly.
3. Tighten gun/feeder connector securing knob.

### **3-2. GUN SWITCH CONNECTION (Figure 3-1)**

Connect gun trigger switch into TRIGGER receptacle on wire feeder as follows: align keyways, insert plug, and rotate threaded collar fully clockwise.

## SECTION 4 – SEQUENCE OF OPERATION

### 4-1. GAS METAL ARC WELDING (GMAW)



**WARNING: ELECTRIC SHOCK can kill; MOVING PARTS can cause serious injury; IMPROPER AIRFLOW AND EXPOSURE TO ENVIRONMENT can damage internal parts.**

- *Do not touch live electrical parts.*
- *Keep away from moving parts.*
- *Keep all covers and panels in place while operating.*

Warranty is void if the wire feeder is operated with any portion of the outer enclosure removed.

**ARC RAYS, SPARKS, AND HOT SURFACES can burn eyes and skin; NOISE can damage hearing.**

- *Wear correct eye, ear, and body protection.*

**FUMES AND GASES can seriously harm your health.**

- *Keep your head out of the fumes.*
- *Ventilate to keep from breathing fumes and gases.*
- *If ventilation is inadequate, use approved breathing device.*

**WELDING WIRE can cause puncture wounds.**

- *Do not point gun toward any part of the body, any conductive surface, or other personnel.*

**HOT METAL, SPATTER, AND SLAG can cause fire and burns.**

- *Watch for fire.*
- *Keep a fire extinguisher nearby, and know how to use it.*
- *Do not use near flammable material.*
- *Allow work and equipment to cool before handling.*

**MAGNETIC FIELDS FROM HIGH CURRENTS can affect pacemaker operation.**

- *Wearers should consult their doctor before going near arc welding, gouging, or spot welding operations.*

See Section 1 - Safety Rules For Operation Of Arc Welding Power Source in the welding power source Owner's Manual for basic welding safety information.

1. Be sure that proper electrical connections have been made to the welding power source and the wire feeder.
2. Be sure that the welding wire has been properly threaded and that correct initial tensions have been set on the drive rolls (refer to the appropriate Owner's Manual).

3. Be sure that the proper shielding gas is connected to the shielding gas valve.
4. Place the wire feed control(s) in the required position for the welding setup.
5. Place the controls on the welding power source in the required position for the welding setup (refer to welding power source Owner's Manual).
6. Wear dry insulating gloves and clothing.
7. Connect work clamp to clean, bare metal at workpiece.
8. Turn on the shielding gas supply.
9. Energize the welding power source and the wire feeder (refer to the respective Owner's Manual).

**IMPORTANT: When installing new equipment, or after prolonged shutdown, allow shielding gas to flow continuously for at least one minute before welding to purge the shielding gas line. To avoid wasting wire while purging, open the drive roll housing.**

10. Press Purge button on the wire feeder (if applicable) or the gun switch to purge the gas line.
11. Close drive roll housing, and adjust tension (see appropriate Owner's Manual).
12. Press the gun trigger, and run the welding wire out beyond the end of the gas nozzle. Cut the wire off so it extends out 1/4 to 3/8 in. (6.4 mm to 9.5 mm) from end of nozzle.
13. Set the Wire Speed control slightly higher than anticipated wire speed.
14. Wear welding helmet with proper filter lens according to ANSI Z49.1.
15. Hold the end of the gas nozzle approximately 1/2 in. (12.7 mm) from the workpiece.
16. Press the gun trigger. Gas starts to flow, wire starts to feed, and the arc will be established. If the welding wire appears to slip, adjust drive roll tension according to wire feeder Owner's Manual.
17. After the controls on the welding power source and the wire feeder (if applicable) have been adjusted for normal operation, the welding power source (and wire feeder) will function automatically when the gun trigger is pressed. Releasing the gun trigger will extinguish the arc and cause the wire feed and gas flow to stop.

### 4-2. SHUTTING DOWN

1. Stop welding.
2. Turn off welding power source and wire feeder.
3. Turn off the shielding gas at its source.



**WARNING: HIGH CONCENTRATION OF SHIELDING GAS can harm health or kill.**

- *Shut off gas supply when not in use.*

## SECTION 5 – MAINTENANCE

### 5-1. INSPECTION AND UPKEEP

Usage and shop conditions will determine frequency and type of maintenance required.



**WARNING: ELECTRIC SHOCK can kill; MOVING PARTS can cause serious injury; WELDING WIRE can cause puncture wounds; HOT SURFACES can cause severe burns.**

- Do not touch live electrical parts.
- Shut down welding power source and wire feeder before working on gun.
- Disconnect gun from wire feeder before inspecting, maintaining, or servicing.
- Allow a cooling period before servicing.

1. Inspect gun for broken areas, cracks and loose parts; tighten, repair and replace as required.
2. Carefully remove any weld spatter or dirt that has accumulated around nozzle opening and inside nozzle.
3. Repair or replace as required all hose and cables; give particular attention to frayed and cracked insulation and areas where it enters equipment.
4. Remove grease and grime from components and moisture from electrical parts and cables.
5. Blow out casing with compressed air when changing wire. This removes any loose metal chips and dirt that may have accumulated.



**CAUTION: FLYING DIRT AND METAL CHIPS can injure personnel and damage equipment.**

- Point gun liner only in a safe direction away from personnel and equipment when cleaning with compressed air.

### 5-2. CONTACT TUBE REPLACEMENT (Figure 3-1)



**WARNING: ELECTRIC SHOCK can kill; MOVING PARTS can cause serious injury; WELDING WIRE can cause puncture wounds; HOT SURFACES can cause severe burns.**

- Do not touch live electrical parts.
- Shut down welding power source and wire feeder before working on gun.
- Disconnect gun from wire feeder before inspecting, maintaining, or servicing.
- Allow a cooling period before servicing.

1. Remove nozzle. A slight twist clockwise aids removal and installation.
2. Cut off any portion of electrode wire which extends beyond end of contact tube.

3. Remove contact tube, and replace with new contact tube.
4. Reinstall nozzle, and resume operation.

### 5-3. CHANGING WIRE SIZES AND REPLACING LINER



**WARNING: ELECTRIC SHOCK can kill; MOVING PARTS can cause serious injury; WELDING WIRE can cause puncture wounds; HOT SURFACES can cause severe burns.**

- Do not touch live electrical parts.
- Shut down welding power source and wire feeder before working on gun.
- Disconnect gun from wire feeder before inspecting, maintaining, or servicing.
- Allow a cooling period before servicing.

**IMPORTANT: .030 and .035 in. (0.8 and 0.9 mm) diameter wires use the same monocoil liner and outlet guide. Changing from .030 in. (0.8 mm) wire to .035 in. (0.9 mm) wire or vice versa requires changing the contact tube only (see Section 5-2).**

To change from .030 in. (0.8 mm) wire or .035 in. (0.9 mm) wire to .023 in. (0.6 mm) wire or vice versa, or to replace monocoil liner, proceed as follows:

1. Remove nozzle. A slight twist clockwise aids removal and installation.
2. Cut off any portion of electrode wire which extends beyond end of contact tube.



**CAUTION: LOOSE WELDING WIRE can cause injury.**

- Keep firm hold on wire during installation, removal, and threading operations.

Spooled wire has a tendency to unravel rapidly when loosened from the spool.

3. Manually retract wire onto wire spool (see wire feeder Owner's Manual).
4. Remove contact tube and contact tube adapter.
5. Disconnect gun assembly from wire feeder, if applicable, and lay it out flat (no coils in cable/conduit).
6. Remove outlet guide.
7. Pull out monocoil liner from gun/feeder connector end of gun assembly.



**CAUTION: FLYING DIRT AND METAL CHIPS can injure personnel and damage equipment.**

- Point gun liner only in a safe direction away from personnel and equipment when cleaning with compressed air.

8. Clean gun casing or liner with compressed air while liner or welding wire is removed.



9. Insert new monocoil liner into gun/feeder end of gun assembly. Be sure monocoil covered with tubing is at the gun/feeder connector.
10. Insert new outlet guide so that 1/8 in. (3 mm) of liner sticks out. Hand tighten outlet guide and then tighten two full turns more.

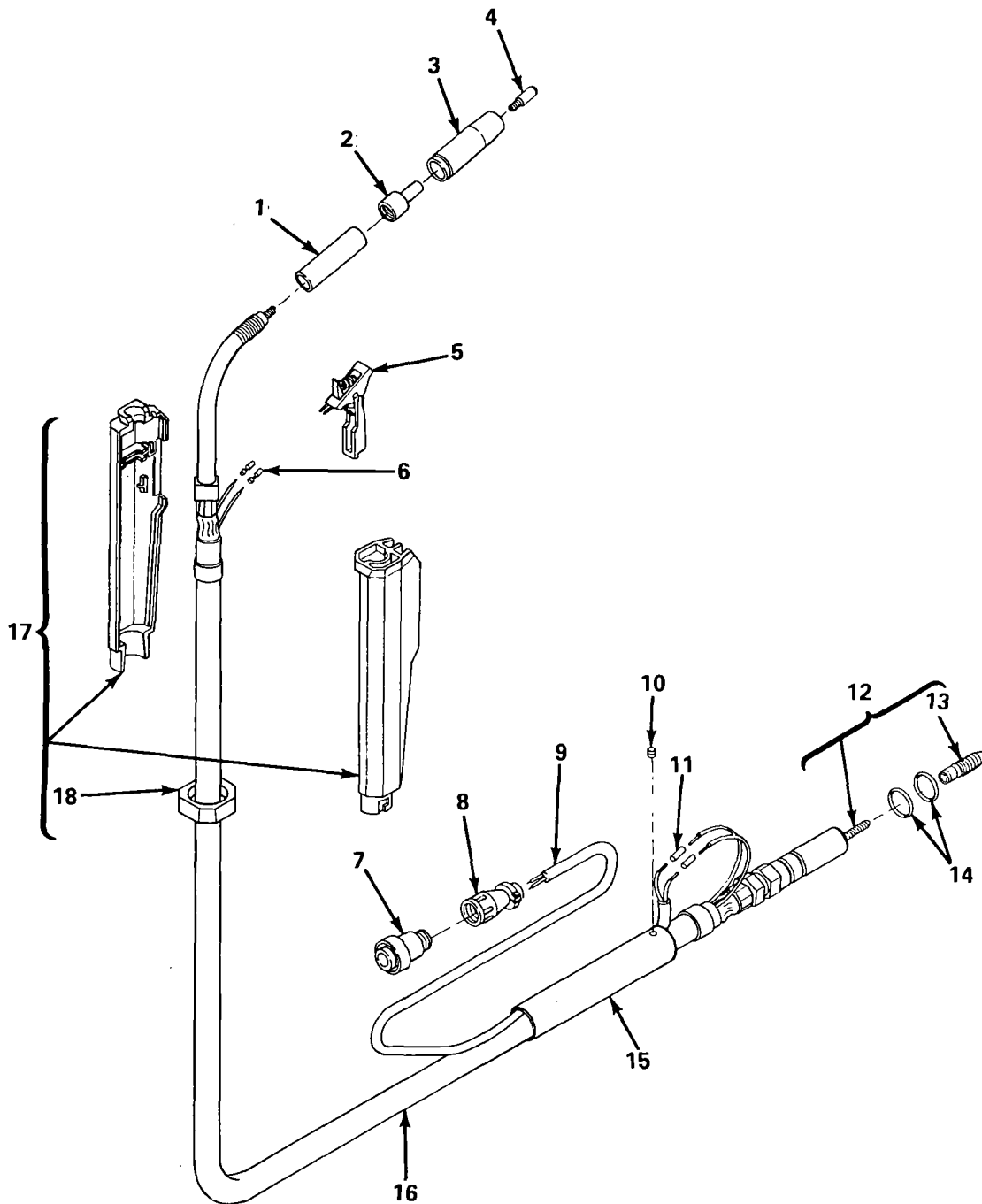


**CAUTION: OVERTIGHTENING OUTLET GUIDE damages liner.**

- *Do not overtighten outlet guide.*

11. Cut off liner so that 3/8 in. (9.5 mm) of liner sticks out of the head tube.
12. Install contact tube adapter.
13. Reinstall appropriate contact tube and nozzle.
14. Reinstall gun to wire drive assembly.
15. Thread welding wire according to the wire feeder Owner's manual, and resume operation.

## SECTION 6 – PARTS LIST



TC-124 605-B

Figure 6-1. Exploded View Of GA-17C Gun

Item No.	Part No.	Description	Quantity
<b>Figure 6-1. Exploded View Of GA-17C Gun</b>			
1	089 885	TUBING, nprn .375 ID x .062 (order by ft) . . . . .	1ft
2	118 267	ADAPTER, contact tube . . . . .	1
3	128 535	NOZZLE, slip type 1/2 orf . . . . .	1
4	087 299	TUBE, contact .023 wire . . . . .	2
4	000 067	TUBE, contact .030 wire . . . . .	2
4	000 068	TUBE, contact .035 wire . . . . .	2
5	120 164	TRIGGER, switch . . . . .	1
6	089 902	TERMINAL, receptacle pin . . . . .	2
7	079 878	HOUSING PLUG & PINS, (consisting of) . . . . .	1
	079 535	· TERMINAL, male 1 pin sz 16 18-14 wire . . . . .	4
8	048 834	CLAMP, cable . . . . .	1
9	604 525	CABLE, No. 18 2/c (order by ft) . . . . .	2ft
10	602 173	SCREW, set stl sch 10-32 x .250 cup point . . . . .	1
11	081 909	SPLICE, prl 20-16 wire nylon . . . . .	2
12	129 178	KIT, liner monocoil .023/.025 wire (consisting of) . . . . .	1
13	128 769	· GUIDE, wire outlet .023 . . . . .	1
12	129 179	KIT, liner monocoil .030/.035 wire (consisting of) . . . . .	1
13	120 995	· GUIDE, wire outlet .030-.045 . . . . .	1
14	079 974	O-RING, 1/2 ID x .103CS rbr . . . . .	2
15	133 147	STRAIN RELIEF, cable . . . . .	1
16	133 352	CABLE, conduit 10ft . . . . .	1
16	133 353	CABLE, conduit 12ft . . . . .	1
16	133 351	CABLE, conduit 15ft . . . . .	1
17	124 697	HANDLE, gun (consisting of) . . . . .	1
18	128 758	· RING, locking . . . . .	1

BE SURE TO PROVIDE MODEL AND SERIAL NUMBER WHEN ORDERING REPLACEMENT PARTS.





